2 Injections at 3-Day Intervals — 1943

28 Guernseys

23 did not develop the disease
5 died with the following ailments
a — at one week — scours — very weak
b — at eleven days — weak from birth
c — at nine weeks — pneumonia
d — at five weeks — unknown
e — at seven weeks — pneumonia

10 Ayrshires

9 did not develop the disease
1 died of the following ailment
a — at 2 weeks — inappetance from birth.

Summarising the records, we draw the following conclusions.

A total of 73 calves were inoculated of which 11 females died from various conditions — 9 being Guernseys. Only 2 developed scours after inoculation; hence, though calf scours is a problem in this herd, our observations are that we have the disease under control, and the owner is raising far more calves than he ever was able to do previously.

Sarcosporidiosis in a Black Duck

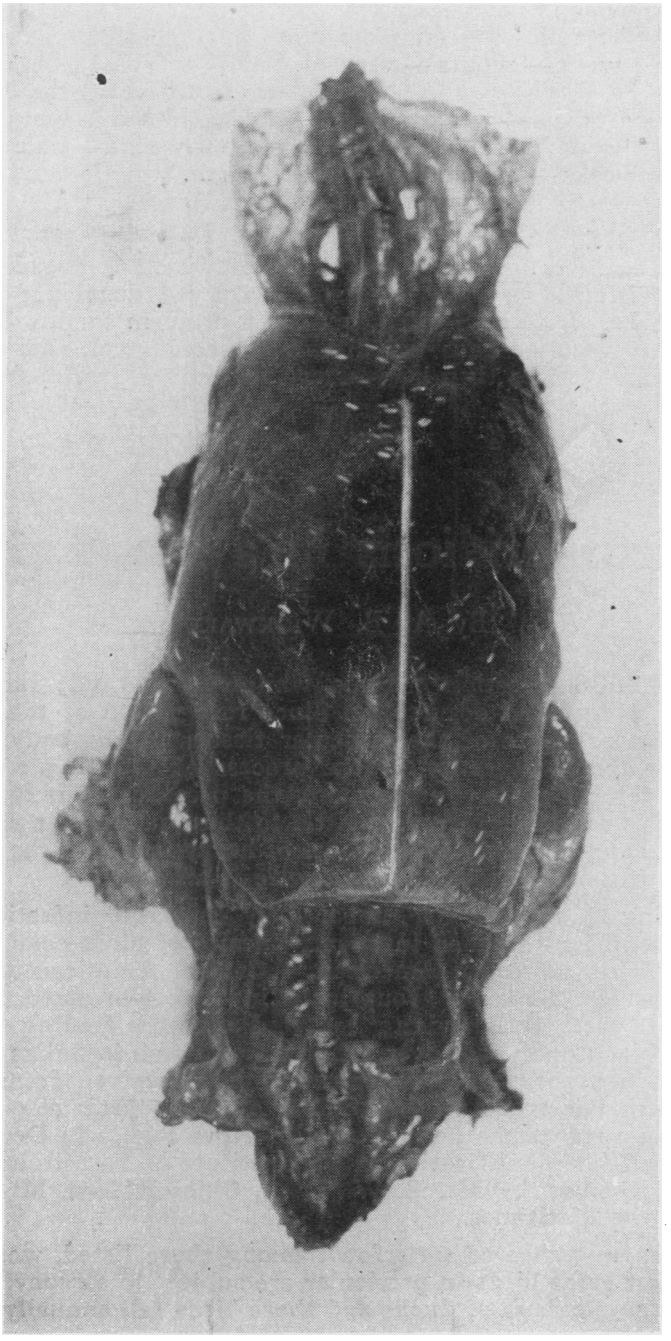
By A. B. WICKWARE*

SARCOCYSTIS infection in birds, while recorded only rarely, is probably of widespread occurrence. Since recognition of the cysts is dependent upon exposure of the muscular tissues of the body, many cases undoubtedly escape detection in the process of plucking and preparing game birds for the table. Furthermore, the presence of only a few cysts in the muscles would signify very little to those unfamiliar with this parasitic disease and it is only in instances of heavy infection that the curiosity of the hunter or meticoulous housewife is aroused.

According to a check list prepared by Erickson[1] infection with sarcosporidia has been recorded in twenty species of birds comprising 4 European, 1 African, 6 South American, 1 Central American and 11 North American species, the latter group including a rose-breasted Grosbeak for Canada. More recently Beaudette[2] reported upon the finding of sarcosporidiosis in a black duck shot over a tide water marsh in Salem county New Jersey, and in a personal communication just received from Dr. W. E. Swales[3] mention is made of the finding of *Sarcocystis rileyi* in a black duck shot by a sportsman near Wolfville, Nova Scotia in December, 1942, and forwarded for identification to the Institute of Parasitology, Macdonald College, Quebec, by Mr. R. W. Tufts, Chief Federal Migratory Bird Officer for the Maritimes.

The preponderance of waterfowl, among those listed, would lead one to believe that game birds in particular are subject to sarcocystis infection but since large numbers of ducks and shore birds fall annually to the guns

*Division of Animal Pathology, Science Service, Dominion Department of Agriculture, Poultry Pathology Laboratory, Ottawa.



Sarcosporidiosis in a Black Duck.

of hunters while the other species mentioned are rarely hunted, the disproportion is probably more apparent than real.

The cysts when present in large numbers give the musculature a streaked or wormy appearance as shown in the accompanying illustration and occur both superficially and in the deeper layers of muscular tissue. They vary in size from small white to larger mature cream-coloured cysts measuring approximately ⅛ of an inch in length. The life histories of the various species of the genus Sarcocystis infecting birds are incompletely known. However, Smith[4] demonstrated that the infection can be transmitted from one flesh-eating mammal to another by feeding flesh containing the mature cysts. Erickson, in commenting on this phase of the subject, points out that to date all records of Sarcocystis in ducks pertain to the puddle or dabbling ducks and suggests that contamination of such shallow water feeding grounds with the excrement of an infected animal or flesh containing mature cysts may explain the relative frequency of infection in such birds as compared to diving ducks that feed in deep waters.

The illustration shows the skinned carcass of a wild black duck, ***Anas rubripes*** heavily infected with the parasite ***Sarcocystis rileyi Stiles 1893.*** This duck was shot recently in the vicinity of Ottawa, Canada.

References

1. ERICKSON, A. B.: *Sarcocystis in birds. The Auk,* lvii (Oct. 1940), pp. 514-519.
2. BEAUDETTE, F. R.: *Sarcosporidiosis in a Black Duck.* A.V.M.A., Vol. xcix, No. 772, July 1941, pp. 52-53.
3. SWALES, W. E.: *Personal Communication.*
4. SMITH, T.: 1901. *The production of sarcosporidiosis in the mouse by feeding infected muscular tissue.* Jr. Exp. Med. 6:1.
5. SMITH, T.: 1905. *Further observations on the transmission of Sarcocystis muris by feeding.* Jr. Med. Res. 13:429.
6. MATHEWS, F. P.: *Sarcosporidiosis in a duck.* J.A.V.M.A., lxxvi (May 1930), pp. 705-707.
7. BECKER, E. R.: *Protozoa "Sarcocystis" Diseases of Poultry,* 1943, The Iowa State College Press. pp. 800-801.

Dr. W. S. Hibbard

IN DECEMBER 9th, 1943 Dr. W. S. Hibbard of Smithville, Ontario passed away at the age of 80 following a brief illness.

He was born in Glandford and received his early education in that district. While a young men he entered the Ontario Veterinary College and graduated from the institution in 1886.

Following his graduation he established himself in general practice at Smithville, Ontario where he has been serving the livestockmen of the district for the past 57 years. He was of a quiet unassuming nature but faithful in the application of his profession and well thought of by the people of the district.